

Interoffice Correspondence

Subject

Report on EOS Lessons Learned
Focus Group Meetings

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From

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On 21 and 25 November 2002 Focus Groups were held with EOS Project representatives to solicit views with regard to improvement of the lessons learning process; a list of attendees is contained in Attachment 1, presentation material discussed at this meeting is provided as separately attached files.

The agenda for these focus groups was based on the following four questions:

1. How is the process for sharing lessons learned performed now by EOS Projects?
2. What comments are there on the NASA Lessons Learned Information System (LLIS)?
3. What are the issues associated with capture and use of lessons learned by the Projects?
4. What suggestions can be offered to improve the process for sharing of lessons learned and how would these tie-in with the Project life-cycle?

The following summarizes discussions held in these focus groups organized in response to each question:

1. How is sharing of lessons learned performed now?
 - a. One Project benefited from common spacecraft contractor experiences with testing and operations that were provided to a second spacecraft in this series.
 - b. One previous Project generated an after-action report but Projects generally do not produce a lessons learned document.
 - c. Routine interaction between people on different Projects is how lessons are most commonly shared.
 - d. One Project shared lessons learned by developing improved tools based on prior experience.
 - e. Lessons are typically shared by word-of-mouth during hallway conversations.
 - f. Exchange of experience takes place between Project Managers at MSR meetings.
 - g. Lessons are exchanged by coincidence of events.
 - h. Staff finds answers by looking for people previously involved in similar Projects.
 - i. Red team and readiness reviews as well as Project-sponsored Workshops provide opportunities to share lessons learned from experienced staff.
 - j. A Contractor on one Project was required to generate a short final report including lessons learned.
 - k. People bring the lessons that they learn from one Project to their next assignment.
 - l. Projects gain benefit of lessons learned by hand-picking the people with insight and experience.
 - m. Projects can hire, as consultants, retirees to act as mentors.
 - n. A risk management plan has been developed on one Project that requires generation of a lesson learned when a risk item is closed out.

2. Comments on the LLIS

- a. Don't know what it is, never heard of it.
- b. Don't use it and some people don't want to read documents to find lessons learned.
- c. No particular problem presents itself in the same way that a database would help address.
- d. A lesson was once submitted to the LLIS.
- e. Contact with people will provide greater value than just retrieving information.
- f. LLIS process was too cumbersome, reviewer feedback to format lessons discouraged people from entering more lessons.
- g. Unless you know what you are looking for it is difficult to find relevant information.

3. Issues associated with capture and use of lessons learned

- a. People are not funded, provided the time, nor motivated to share lessons learned.
- b. GSFC culture focuses on current Projects, not what was done before or how it will be done in the future (except through NPGs and GPGs).
- c. After a Project is completed neither budget nor schedule is available to document lessons learned.
- d. At the end of a Project, people leave or move-on without capturing lessons learned.
- e. As people retire their knowledge and experience is leaving GSFC.
- f. Staff are not encouraged to bring their files from previous Projects to their next Project assignment.
- g. Most Projects do not have a formalized process or a specific approach for handling lessons learned.
- h. Lessons learned are for the most part not written down by the Projects.
- i. Why is a formal system needed for lessons learned? Project Managers are able to create the necessary environment to encourage the sharing of corporate experience.
- j. I have many ideas, where to put these?
- k. Workshops and mini-courses have limited attendance, participation needs to be encouraged.
- l. People don't have the time to sift through a massive volume of information. After-action reports while containing good information do not allow people to quickly find lessons without going through the entire document.
- m. Libraries that organize documents in sequential order make finding information difficult.
- n. Obtaining information from databases and libraries is difficult, people won't use them.
- o. NASA and Contractors unwillingness to report mistakes, people/organizations don't want to show their weakness. Need to make reporting of negative lessons non-threatening.
- p. Lessons learned has a connotation of negative events, there needs to be encouragement for capture of best practices and successes.
- q. Contractors will not share information that could impact a competitive advantage.
- r. Dealing with multiple Contractors before contract award limits information exchange.
- s. NASA's culture does not encourage capturing or sharing information, people want to get and hold not give.
- t. Interaction is not encouraged in the NASA culture, either between Projects or individuals.
- u. Each Project Manager applies their personal approach to dealing lessons learned.
- v. People-to-people contacts should not need to go through Branch Heads.

4. Suggestions for capture and sharing of lessons learned tied-in with the Project life cycle
- a. An additional (optional) MSR chart on lessons learned could be incorporated as a walk-on.
 - b. At completion of each Project there should be a lessons learned debriefing and a final report.
 - c. Providing lists of subject matter experts would be an immediate value-add.
 - d. Better use needs to be made of the Center's matrix organization to share experience.
 - e. Weekly functional and cross-Project roundtable meetings should be held to increase awareness of ongoing activities and issues.
 - f. Staff prior Project experience and their responsibilities on those Projects should be captured so that those seeking assistance can find people with relevant background.
 - g. Project monthly reviews should periodically be attended by AETD branch heads.
 - h. Project monthly reviews should be attended by senior staff with cross-Project experience.
 - i. Results of Project reviews should be more widely disseminated.
 - j. Retirees are a source of extensive lessons learned and their experience can inspire people.
 - k. Use of existing communications techniques such as the Code 400 Critical Path should be used for dissemination of information related to sharing of lessons learned.
 - l. If you can find what you want, when you need it then people will use it.
 - m. Whatever system is developed for sharing lessons learned needs to be simple to use.
 - n. Word-of-mouth is the easiest process for sharing lessons learned.
 - o. Sharing lessons learned needs to be part of the normal process and not labor intensive.
 - p. Sharing of lessons learned should be integrated as part of the Project review process.
 - q. Lessons should provide sufficient summary level information to allow an assessment of interest/relevance without having full content presented.
 - r. It is necessary to know what lessons are useful to capture and that lesson quality is checked.
 - s. Linking related lessons together would be beneficial.
 - t. Lessons need to be organized by Project phase, the situational aspect of lessons will determine their applicability.
 - u. People who can see across multiple Projects should prepare lessons learned, and outsiders could write more uniform lessons learned and streamline the process.
 - v. Best practices need to be captured.
 - w. Staff needs to be encouraged (pushed) to write things up.
 - x. Need to develop a uniform approach to deal with contractors in capturing lessons learned.
 - y. The lessons people are looking for need to include things they haven't thought about and related aspects with the potential to cause problems.
 - z. There should be greater emphasis on people-to-people processes such as informal mentoring and retiree outreach, people like show-and-tell (storytelling).
 - aa. One-to-one techniques are as, if not more, important than one-to-many approaches for sharing lessons learned.
 - bb. There needs to be more encouragement from Center, Program and Project management for sharing of lessons learned.
 - cc. The people-to-people process for sharing lessons learned needs to be interesting and should address a diversity of topics (i.e. programmatic, management, engineering, resources, etc.).
 - dd. Building small spacecraft in-house is one of the most effective approaches to gain and exchange Project experience.
 - ee. The process for capturing and sharing lessons learned needs to be formalized and mandated.
 - ff. Center and Program management needs to motivate a culture change for knowledge sharing.
 - gg. Quarterly briefings to Directorate management on the subject of lessons learned should be provided.
 - hh. Participation in sharing lessons learned needs to be continuously reinforced at all levels.
 - ii. At every meeting and review the question should be asked; "What is the lesson learned?"

Distribution:

EOS Lessons Learned Working sub-Group Members
EOS Pilot for Lessons Learned Focus Group Attendees
EOS Project Managers and Deputies

Attachment 1

EOS Pilot Focus Groups 21/25 November 2002

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